

ANNUAL REPORT

OF THE

9661

PUNJAB VETERINARY COLLEGE,
CIVIL VETERINARY DEPARTMENT,

PUNJAB

AND THE

GOVERNMENT CATTLE FARM HISSAR

For the year 1912-13.

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MENT, PUNJAB, AND THE GOVERN-
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FOR 1912-13.

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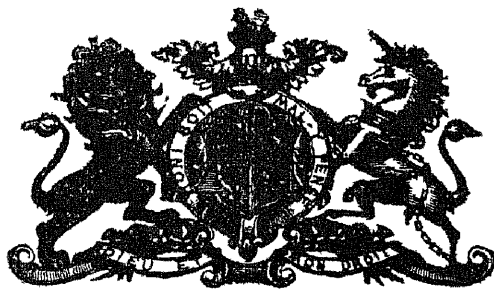
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OF THE
PUNJAB VETERINARY COLLEGE,
CIVIL VETERINARY DEPARTMENT,
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AND THE
GOVERNMENT CATTLE FARM HISSAR

For the year 1912-13.



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No. 2465 S. (Rev. & Agri.—Genl.).

FROM

THE HON'BLE MR. J. P. THOMPSON, I.C.S.,

*Revenue Secretary to Government,
Punjab and its Dependencies,*

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
DEPARTMENT OF REVENUE AND AGRICULTURE.

Dated Simla, 5th September 1913.

Revenue and Agriculture.

General.

SIR,

I AM directed to submit, for the information of the Government of India, a copy of the Annual Report of the Civil Veterinary Department for the year 1912-13, including the Annual Report on the Hissar Cattle Farm, and to convey the following remarks of the Lieutenant-Governor.

2. Definite proposals have been submitted, and are now under the consideration of His Honour for the extension of the College course to four years, to be followed by a post-graduate course of one year. It is, however, considered that the pay and prospects of the service may not be sufficiently attractive to induce candidates to spend an extra year under training, and a scheme has now been formulated by the Director of Agriculture and Industries for the creation of a grade of Deputy Superintendents and for the increase in the number of Veterinary Inspectors. The necessity for the appointment of Deputy Superintendents has been under discussion for some years, and the main objection hitherto put forward has been that men of sufficient education and training are not forthcoming. This drawback would be removed by the introduction of the post-graduate course, and at the same time the appointments would materially add to the attractions of the service. The two schemes which are thus closely connected are still under discussion, together with a further proposal to increase gradually the number of Veterinary Assistants, and in view of the far-reaching changes which they may involve in the conditions of veterinary service in this Province, His Honour is not prepared at this stage to make any definite pronouncement regarding them.

3. The working of the College during the year under report has been satisfactory. The demand for admission is very great, but owing to the difficulty in obtaining practice and a sufficient number of subjects for operative surgery, it has been found necessary to restrict the number of admission each year to 60, pending the opening of the new College buildings, and at the same time to secure a fair proportion of places to District Board and private students from the Province, who were being crowded out by students from the Army and from other Provinces.

Even when increased accommodation becomes available, it will be necessary to limit the number of admissions, for even now the size of the classes is too large for efficient instruction. The facts appear to demonstrate the need of another Veterinary College in Northern India. His Honour is glad to observe that the number of cases treated in the hospital has increased, though the Principal is not hopeful of any further improvement in this direction. The Lieutenant-Governor recently inspected the site of the new College, and the location of the various buildings has now been finally decided.

4. The experiment of demanding fees for inoculation has not proved a success, only 18,335 inoculations against rinderpest being performed as against 32,096 during the previous year, and, the number of deaths from contagious disease, especially rinderpest, having materially increased, the practice has now been discontinued. The experiment was clearly in advance of popular ideas on the subject, for, as the Chief Superintendent remarks, people who are accustomed to have themselves and their children vaccinated and inoculated free cannot understand why their cattle should not also receive free treatment. In spite of the falling-off in the number of inoculations the number of cases treated in villages is well up to the average, and the number of castrations is double that of last year. His Honour agrees with the Chief Superintendent as to the importance of castration if cattle-breeding is to be improved, and has recently taken the views of district officers as to possibility of provincial or local legislation for the control of immature and wandering bulls. The general opinion, in which the Lieutenant-Governor concurs, is that private rights of property and religious sentiment make effective legislation impracticable, and that the difficulty can best be met by encouraging District Boards to provide good bulls. Once the zamindar can obtain the services of a good bull without difficulty, it may be left to his commonsense to protect his stock from immature and degenerate animals. In the Central Punjab, where greatly increased interest in cattle-breeding has been shown during the last few years, matters are already moving in this direction, and His Honour is glad to observe that the Director of Agriculture is investigating the possibility of providing the west and north-west portion of the Province with a sufficient supply of good stock-getters. The Veterinary Hospitals continued to do good work, their number having risen to 11, at which 270,889 cases were treated. The increased interest in sheep-breeding is a hopeful sign, and the results of introducing the Merino breed are beginning to make themselves felt.

5. The Hissar Cattle Farm is now under the full control and management of the Punjab Government. The year has not been a very satisfactory one for the farm, the expenditure being largely in excess of the receipts. The deficit may be partly due to two bad seasons in succession and to the fact that animals have hitherto been sold for less than their market value. The full price is now being recovered, and it may be expected that the financial results will be better, but even so it would appear doubtful whether the farm can ever be a source of profit. The value of the farm as a provincial asset is somewhat discounted if it is to be run at a loss financially, and His Honour is of the opinion that the strictest economy must be observed in its management.

6. In conclusion, the Lieutenant-Governor wishes to express his appreciation of the good work done by the officers of the department, which has continued to maintain its high level of efficiency.

I have the honour to be,

SIR,

Your most obedient servant,

J. P. THOMPSON,

Revenue Secretary to Government, Punjab.

ANNUAL REPORT ON THE CIVIL VETERINARY
DEPARTMENT, PUNJAB, AND THE GOVERNMENT
CATTLE FARM, HISSAR, FOR THE YEAR 1912-13.

**Note on veterinary progress in the Punjab by the Director of
Agriculture.**

THE future of the Veterinary College is still undecided. Proposals for extending the course to four years and for starting post-graduate classes have been submitted to government, and the additional professorships can now be filled up, but everything waits for the new buildings, regarding which no final decision has been arrived at.

District work is being carried on as in past years, and in the centre of the province the popularity of the hospitals is growing rapidly.

Cattle-breeding is receiving special attention from district boards, and in the east and middle of the province, for which Hissar-bred bulls are suitable, considerable progress is being made. Even now in a few districts—Karnal, Jullundur, Ludhiana and Sialkot especially—more money might be devoted to buying bulls. In Multan and in the north-west of the province the difficulties are much greater: there is no popular demand there for bulls, and even when there is a demand it is difficult to meet it, as Hissar bulls are not liked and Dhanni bulls have not so far proved good stock getters and in any case are difficult to secure even at very high prices. I shall have the whole question of the suitability of Dhanni bulls and the measures necessary to provide a sufficient supply of them investigated. The experiment in the Rawalpindi and Jhang districts of having bulls at veterinary hospitals and charging a covering fee is worth watching and extending.

The Hissar Cattle Farm is a great provincial asset, but I am doubtful whether it will ever be financially profitable. It has had a fairly successful year. Expenditure must expand as the number of the stock rises and the heavy item of wages goes up with the rise of prices, but income should also mount up, more especially as all animals issued except to Punjab district boards are now paid for at market prices.

Officers and subordinates have worked well. I hope it will not be long before we have a whole-time Superintendent for the north Punjab and have not to share him with the Frontier Province. Major Walker has received the C. I. E. in recognition of his exceptional professional skill and administrative abilities.

ANNUAL REPORT ON THE PUNJAB VETERINARY COLLEGE, BY
COLONEL H. T. PEASE, PRINCIPAL.

COLONEL H. T. PEASE, C.I.E., was in charge of the office of Principal and Professor of Medicine during the year. Mr S. H. Gaiger, the Professor of Sanitary Science, was granted an extension of leave on medical certificate, and was absent during the whole year. Mr. R. Branford was transferred to Hissar. Major G. K. Walker was appointed Professor of Sanitary Science in June 1912.

In May 1912 sanction was accorded to the entertainment of extra veterinary establishment. Two European Professors in imperial service have been recruited. They are at present under training in the Punjab Provincial Veterinary department until accommodation is provided in the new college and the future classes are definitely decided on. The remainder of the sanctioned establishment will be recruited as required.

2. The summer session commenced on the 23rd April and closed at the end of June 1912. The winter session commenced at the beginning of October and closed at the end of March 1913.

Fifty-two students were admitted on the 20th April 1912, and with 5 remanded formed the first year's class of 57.

There were 59 students in the second and 66 in the third year classes.

3. The newly-admitted students came from—

Indian Cavalry Regiments	...	...	...	28
Army Remount Department	...	...	...	2
Imperial Service Troops and Native States	...	...	...	5
Central Provinces	...	...	...	7
United Provinces of Agra and Oudh	...	...	...	2
Punjab District Boards	...	...	...	8
Private students	...	...	...	5

Of these 20 had passed the middle and only 2 the matriculation examination. The military students are admitted under paragraph 68 *et seq.* of the Army Regulations, India, volume VIII.

In order to regulate the number of students admitted from various sources, new rules providing for the admission of a fair proportion of each were sanctioned by government during the year. These rules allow us to admit 17 private and district board students from the Punjab.

4. The demand for admission to the college is very great, and as we are unable to cope with it and provide sufficient graduates for the needs of the country the question of building and equipping a second vernacular Veterinary College, preferably in another province, is worthy of consideration.

5. In June 1912 six final year's students who had been remanded were examined and passed. Fifty-seven students appeared in the first year's examination, and 54 or 94.7 per cent. passed. Fifty-eight were examined in the second year's class, and 17 or 81.03 per cent. passed. Sixty-six students of the final year's class were examined by the board of examiners in April, and 56 or 86.1 per cent. obtained the diploma.

The results of the examinations are satisfactory, and show a considerable improvement over last year. The percentage of passes is high considering the very large classes which have to be taught.

One of the failures in the first year and five in the second year class have left the college. Two students of the first, four of the second, and one of the third year's class having failed only in one subject and obtaining sufficient marks will be examined again in June.

6. Besides the ordinary work of teaching veterinary assistants, a class of dressers from the Transport Department was held during the summer vacation, and 50 men were trained.

A class for the training of farriers was also held and 12 men were trained practically and passed the examination.

7. The number of patients treated in the hospital
 Ho p. at was as follows :—

			1912-13.	1911-12.
Equines	...	...	.. 2,650	2,189
Bovines	...	..	... 1,642	1 195
Canines	..	...	... 581	582
Contagious ward	...	...	... 176	161

Every effort has been made to increase the practice which is so very necessary for teaching purposes, and I am glad to be able to report that there has been a satisfactory increase during the year. I am not however hopeful that any great further increase can be expected as animals are fewer and a considerable number of veterinary officers are now stationed in Lahore cantonment who practise privately and do most of the cantonment work.

8. There has been considerable improvement in the work done. More
 Contagious ward. attention has been given to demonstrations at *post-mortem* examinations, of which 141 were carried out.

Some investigations have been commenced into contagious? pleuro-pneumonia in goats.

The atoxyl and arsenic treatment of surra in the horse has been tested.

Neo. Salvarsan has been tried in the treatment of surra in the dog.

Some experiments have been made with hæmorrhagic septicæmia.

9. The sum paid into the treasury was Rs. 14,005-2-0 against
 Income Rs. 15,078-15-0 last year. The decrease is due to the free treatment of horses belonging to gariwalas and poor persons who cannot afford to pay fees.

10. The demand for graduates is still very great, and though our classes
 General are far too large, we are unable to meet it. The scheme put forward and sanctioned for providing means of increasing the number of graduates from this college is being reconsidered, but no decision has so far been arrived at. In the meantime we are keeping our classes at about 60, which is too large.

The training in some of the subjects taught has been greatly hampered by lack of accommodation. The want of a di-secting room has again been very badly felt, and the results in the examination in this subject have not been at all satisfactory. The laboratory building has also not been extended, and the present accommodation is totally inadequate

11. The Principal's and the translator's spare time has been occupied
 Text books in re-writing the text-book on Equine Medicine, which is now in the press.

A new edition of "Principles of Horse Shoeing" has been published by them during the year.

12. I am glad to say that the prospects of veterinary assistants in the Transport Department have been materially improved and may now attract some men to that service.

13. His Honour has selected a site for the new college, and plans and estimates for the proposed buildings have been prepared and submitted to government.

14. In order to stimulate the interest of the veterinary assistants and to help them to improve their knowledge, a Veterinary Association has been established during the year. At present the brunt of the work connected with it has fallen on the college staff, but it is hoped that things may improve in this direction. It has been decided to publish a quarterly journal in the vernacular in connection with association.

15. As usual the staff have worked loyally and well, and I think take some pride in the progress of the institution. I am glad to say that Raja Ghulam Hussain Khan, one of our old teachers, has at last been rewarded for his services by the grant of the personal distinction of Khan Sahib.

ANNUAL REPORT OF THE CIVIL VETERINARY DEPARTMENT, BY
LIEUTENANT-COLONEL J. FARMER, CHIEF SUPERINTENDENT.

Part I.

1. The following statement shows the names of the officers who held charge of the several appointments and the amount of touring done by them :—

Name of appointment.	Name of officer.	Date of holding charge.	Number of days spent on tour.	NUMBER OF MILES TRAVELLED	
				By rail.	By road.
Chief Superintendent...	Major G. K. Walker...	1st April to 11th June 1912.	30	1,015	183
	Lieutenant-Colonel J. Farmer.	12th June 1912 to 31st March 1913.	151	5,302	1,421
Superintendent, North Punjab.	Mr. Woodley ...	1st April 1912 to 31st March 1913.	57	2,834	658
Superintendent, South Punjab.	Mr. Taylor ...	1st April 1912 to 31st March 1913.	182	6,660	1,237
Superintendent, Government Cattle Farm, Hissar.	Lieutenant-Colonel J. Farmer.	1st April to 10th June 1912.	...	...	...
	Mr. Branford ...	10th June 1912 to 31st March 1913.	...	...	...
Officers under training...	Mr. Meadows ...	14th May 1912 to 18th January 1913.	61	2,636	279
	Mr. W. A. Pool ...	1st January to 31st March 1913.	39	2,195	543
	Mr W. Taylor ...	28th March to 31st March 1913.	..	...	...

The duties of the camel specialist were carried on by the Chief Superintendent for a short time when Mr. Leese was on leave.

The supervision of the Cattle Farm at Hissar has been placed upon the Chief Superintendent since Lieutenant-Colonel Farmer took over charge from Major Walker.

Part II.—Treatment of disease.

(1) CONTAGIOUS DISEASE.

2. Outbreaks of contagious diseases were reported from all the districts in the Punjab.

During the year under report 28,125 deaths from contagious disease were reported against 25,455 last year. The increase is due to the large number of outbreaks and also to the fact that a comparatively small number of cattle were protected from rinderpest by inoculations as fees for inoculations were charged. The people have been accustomed to have themselves and their children vaccinated and inoculated free; therefore they cannot understand why their cattle should not be treated accordingly. The Department was greatly handicapped on this account. The Chief Superintendent, after a considerable amount of trouble, managed to get inoculations done in Jhang where the people are very much against it. He was informed that the Malakwal plague incident was the main cause. A few zaildars after his lecture came forward to pay for 100 cattle to be inoculated in their zails. This will show the people the benefit of inoculation. The Department has been advising the people in villages as to the necessity for isolating diseased animals.

Patwaris undoubtedly help the Department greatly, but cases occur where reports should be sent in more punctually by them. This of course again hinders the Department in dealing with disease at its commencement, which is a very important matter.

Equines.

Table II.

3. Deaths from equine contagious disease number 71 against 59 last year. The increase is accounted for in paragraph 5 below.

4. *Glanders* has again been prevalent on the Pathankot, Palampur and Dalhousie tonga lines. Very energetic measures have been taken to put a stop to it. During the year, at the Chief Superintendent's suggestion, veterinary assistants have been appointed by the Indian Horse Dāk Company. A special veterinary assistant has been appointed for detecting glanders in Kangra and Dalhousie.

There are now two veterinary assistants, one for the Dalhousie line and one for the Palampur line. The disease is not confined to the Indian Horse Dāk Company's horses, as other cases have been found in the district. His Highness the Raja of Chamba and the Superintendent of Mandi State have been advised regarding the prevalence of the disease, and orders have been issued to veterinary assistants at Palampur, Dehra, Hamirpur, Kangra and Pathankot to keep a sharp look-out, as large numbers of animals from and to these states pass along these routes. All stands (tonga and ekka) at the different halting stages have been cleared and disinfected. Should the disease still continue, two more veterinary assistants will be appointed to detect cases.

In the past tahsildars have been passing animals as fit for work in ekkas, etc. This is unsatisfactory. The Chief Superintendent considers it very necessary that all licensed ekka and tonga animals in all the districts in the Punjab should be examined and passed by veterinary assistants and some responsible officer before licenses are issued. Deputy Commissioners have been advised to have this done and again to have a quarterly inspection of the animals. This will not only keep a check on disease, but will make owners look after their animals more carefully and will prevent cruelty cases.

Table II.

5. *Surra*.—There were 25 deaths from surra as against 16 last year. Muzaaffargarh district alone accounts for the increase. The disease is said to have been imported from Dera Ghazi Khan.

6. *Strangles* as usual was prevalent. This disease shows itself during and after fairs. One or two diseased animals bring the infection either from villages or serais, and the result is whenever a large number of animals are collected the disease spreads. It is very difficult to prevent this. Inspections are made of all animals and diseased ones isolated, but it is quite possible for a case to be in the incubative period and not to show any external symptoms at the time of entering the fair ground.

7. Tetanus, Mange and Bursatee were also prevalent.

Bovines.

Table II.

8. *Rinderpest* was reported from every district in the Punjab. The mortality was 12,924 against 9,317 last year. Although the year was not an unusually unhealthy one, the heavier mortality can be said to be due to the fact that more inoculations should have been performed. This, as stated before, was prevented owing to the charging of fees, but as fees have now been withdrawn, better results will ensue.

Treatment with potass permanganas was carried out in the central circle. Out of 159 animals so treated 130 recovered. More will be done when opportunities occur to prove the success of this treatment.

9. The Department has been explaining to the people the absolute necessity for isolation and nursing. In one place the Chief Superintendent

actually saw sick animals being fed on dry joar (*Sorghum vulgare*) and bajra (*Pennisetum typhoideum*). This gave him an opportunity of explaining to the different gatherings the bad results of such feeding. It is only by dealing with the people in this way that they get to understand the elements of practical hygiene and so improve the conditions under which cattle are reared. The disease in a famine year is generally worse, as the animals are so debilitated that they are unable to withstand an attack of the disease, and there is no reserve of good fodder with which to feed sick animals during convalescence.

10. Eighteen thousand three hundred and thirty-five inoculations were performed in 197 outbreaks which occurred in 19 districts: 3,651 uninoculated and 67 inoculated animals died in the course of the outbreaks.

Preventive inoculation,—table III.

A few of the district boards have paid for inoculations which has been a great help to the department. Had it not been for them the mortality would have been heavier than is reported.

11. *Foot and mouth disease*.—This disease was reported from 23 districts, and 323 animals died against 684 last year.

Epizootic Aptha,—table II.

The mortality from this disease is very small, and is chiefly caused by flies (*Sarcophagus liniata colis*). This fly is capable of laying at least 20 larvæ in a minute on the sores in the interdigital space and mouth. Veterinary assistants have been told to explain to the people that they must be very careful when their animals get foot and mouth disease that maggots do not get into the wounds. When this occurs they should go to the veterinary hospital at once and obtain dressing. The same fly causes a great deal of trouble in rinderpest.

Although the deaths from foot and mouth disease itself are very small, the deformities caused in the feet by it and maggot infection are very great, and this is chiefly the reason of so many bad feet in the country. It also affects the development of young stock considerably. Veterinary assistants have been shown a very simple and inexpensive method of passing animals through a trough containing phenyle. A trench 6 feet wide, 10 feet long and one foot deep, filled with phenyle solution, is made in the ground and animals quietly driven through it. This is so easily done that it can be carried out in any village.

12. Material from foot and mouth disease cases was sent to Bareilly for the benefit of the Royal Commission investigating the disease.

13. *Hæmorrhagic Septicæmia* was reported from every district in the province. Eight thousand six hundred and seventy-six animals died against 10,894 in the previous year.

Table II.

From the Chief Superintendent's personal experience it is ascertained that the disease remains confined to certain areas where water lies in shallow pools, where land becomes inundated, and in places where canal water gets on to already infected land which is not cultivated.

The following occurred on the Hissar Farm. There is a shallow tank which was supplied from the Western Jumna Canal. Hæmorrhagic septicæmia occurred at all times of the year, and after careful investigation it was discovered that the herds affected with the disease grazed on the banks of this tank. The area was enclosed with a thorn fencing, and the disease in consequence stopped. About three weeks later owing to a storm the fencing became breached and the animals got into the area and the disease broke out again. The breaches were repaired and the tank dried, and the grass and jungle on the ground all round cut and burnt. The intention was to have the whole place well ploughed up, as it is believed that if these places are so treated, the organism which lies under the soil, where there is still moisture, if exposed to the sun will be destroyed. The Chief Superintendent has been advising zaildars to have

this done. At what depth the organism survives he is unable to say. In large infected tracts besides rivers he recommends that cattle be kept away until the ground becomes dry on the surface and the grass is fully ripe. To expect a grazier to prevent cattle going to these areas before they are dried, is a great deal. Until the people thoroughly understand the benefit of the system, vaccination will have to be done. This method will be carried out experimentally next year in as many places as possible. Veterinary Assistants have been informed by lectures and circular of this method. He thinks from his experience that it is not fly transmitted.

14. *Preventive inoculation* — One thousand and forty-three animals have been inoculated with hæmorrhagic septicæmia serum in 9 outbreaks, and 1,332 were vaccinated in 27 villages in 6 districts.

15. *Blackquarter* — The mortality from this disease is normal. Until inoculations are performed regularly, *i.e.* after animals are weaned, in infected areas the mortality will not decrease. At the Hissar Farm this is done and the results have been good. Deaths do occur before weaning, but not so often as after weaning. The immunity lasts for six months after vaccination.

At Hissar certain jols (low-lying depressions where grass grows luxuriously and keeps green for a longer time) were cleared out and burnt one year; the result was good and fewer cases occurred. This was done before the regular vaccination was started

Other contagious diseases.

16. There is nothing special to report.

17. Three cases of suspected tuberculosis were tested with tuberculin; these cows belonged to the dairy of the Central Jail, Lahore.

18. Information was received by the Chief Superintendent that a disease called Phutka amongst goats in Kangra and Kulu was devastating the flocks. Phutka is a corruption of *Pharak jana*, and means instantaneous death. The disease is confined to goats, and deaths are not sudden as the name indicates. The goats belong to a class of people called Gaddis who are chiefly Khatris, who have settled in Kangra, Chamba and Mandi States

The term Gaddi is derived from Gadaria, which means a shepherd. They graze their animals over very large areas extending from Hoshiarpur, Sirmur and Gurdaspur on the south to Lahul and Spiti on the north. They march their sheep and goats at least five miles a day. After a great deal of difficult marching and visiting their encampments, cases of the disease were procured. These were sent to the Punjab Veterinary College for investigation, as the Chief Superintendent's time was fully occupied in investigating the causes of the disease in the field. The disease is a contagious pneumonia, and owing to the goats being marched daily, it gives the animal very little chance of recovery. The necessity of isolation and giving rest to diseased goats has been fully explained, but it is a difficult matter to carry out, as Gaddis cannot stay more than a day at a place when on the march, owing to rules and regulations laid down. In this way ground becomes contaminated, and fresh flocks passing that way are affected. The Gaddis have been told to report when a flock is diseased, so that arrangements can be made for segregation and rest. Before the Chief Superintendent's visit the Gaddis were so suspicious that they would not divulge where the disease was prevalent. This suspicion has now been overcome.

19. A great number of goats die of inanition brought about by inability to graze on the hill sides, owing to their being crippled by diseased feet. The disease is caused by injuries in the cleft of the foot, the injuries being followed by abscesses. Gradually the horn of the foot sloughs and the disease extends up the leg. The injuries, if attended in time, can be cured. The Gaddis have been advised as to treatment, dressings have been given to them, and methods of application shown and explained.

20. One hundred and sixty specimens were received and examined by the Chief Superintendent, and 85 and 269 by the Superintendents, North and South Punjab, respectively. Specimens of blood-sucking flies and ticks were collected and forwarded to Pusa.

The Chief Superintendent hopes that in the future veterinary assistants will know more about the flies and ticks in the province than they do at present. After the inspection of hospitals short lectures have been given to the men, and they are becoming acquainted with the different species. It is hoped that next year the areas showing the different species of flies will be mapped out.

All the important tonga lines in the province were inspected.

(2) OTHER DISEASES.

21. During the year 9,948 villages were visited by the veterinary staff on tour, and 63,416 animals were treated.

Table IV

22. Two thousand two hundred and sixty-eight castrations were performed against 1,059 last year. Although there is a marked increase, but yet it is insufficient. Cattle-breeding will never improve until a large number of castrations are performed.

23. The Chief Superintendent has observed during his tour that cows are being served by imperfectly emasculated bulls and by immature young stock.

He has also observed these animals preventing a good bull from covering. Itinerating veterinary assistants have been told to explain to the people how all this causes harm and losses to owners. They have been informed that a much larger number of animals not up to bull standard must be castrated.

VETERINARY HOSPITALS.

24. At the close of the year there were 113 hospitals in the province at which 270,889 cases were treated against 109 hospitals and 241,291 cases in past year. This is very satisfactory increase, and indicates the growing popularity of the institution.

Table V.

25. At present there are 86 veterinary hospitals on approved plans. The Chief Superintendent is glad to say that after a little persuasion a new veterinary hospital is being built at Amritsar. He has to thank Mr. J. Addison for his kind help in the matter.

26. A well has been sunk by contributions collected by the district board and zaildars in the compound of the Phillaur hospital. Applications from zamindars for veterinary hospitals are being continually received. The Chief Superintendent's intention is to get more help by persuading people to subscribe towards the buildings of veterinary hospitals.

27. Goushalas have been visited by the department and advice given.

28. The only income is from fees which amounts to Rs. 18,489 against Rs. 16,450 last year. This is a satisfactory increase. The Department is not a commercial one, and what should be remembered is the amount of good done to the sick and lame animals, belonging to the poor, free of charge.

29. All cruelty cases arrested by the Inspector, R. S. P. C. A., on the Pathankot-Dalhousie line are treated at the veterinary hospitals. A great number were also seized and sent to hospitals by the Superintendents of the Department for treatment. This Department has done a great deal more during the year to alleviate the suffering of the dumb animals than the outside public can imagine.

30. The Simla veterinary hospital is doing good work, and is self-supporting. Veterinary Assistant Ghulam Hussain deserves great praise for his work. During the year the income was Rs. 5,644. After deducting all expenses, Rs. 3,250 were credited to the provincial revenues.

31. Owing to Delhi being made an Imperial City in October 1912, the management of the hospital there was taken over by the imperial government. The Superintendent and the Inspector continue their usual supervision.

Part III.—Breeding operations.

BOVINES.

32. Table No. VIII gives the account of stud bulls at work in the districts where they are the property of the district boards. Ninety-one bulls were supplied from the Hissar Cattle Farm on indent from 16 district boards and 13 were purchased locally. At the end of the year under report there were 544 bulls.

33. The system of supplying bulls is satisfactory. Some of the district boards purchase bulls for Rs. 200 and sell to responsible men for half the price. This is a very good method, but a sufficient number of men do not come forward to purchase. The most satisfactory method would be for the Agricultural Banks to purchase; this would place the responsibility of looking after the bull upon more people because a larger number would have a share in the bulls. The Chief Superintendent has consulted Mr. Langley, Registrar of the Co-operative Credit Societies, who has very kindly helped him, and the Inspectors of the Banks have been consulted in the districts.

34. Cattle-breeding will always be handicapped until the letting loose of brahmini bulls is put an end to, or it be arranged for the pious hindus to consult the department before letting a bull loose. The present pious man cannot and does not wish to pay the price of a good animal, as prices have so greatly increased in the last few years. This is a delicate matter, but religious sentiment in this matter is not so strong now as it used to be. The department has carefully considered this. The best way to deal with these useless animals would be to issue orders that all inferior brahmini bulls should be reclaimed by their original owners. The selection should be done by committees of lambardars with the veterinary inspectors. If the animal is not claimed, it can be either sent to a goushala, if so desired, or castrated and sold by auction, and the money credited to the district board to go towards the purchase of a good bull.

Pious hindus in the future wishing to present a brahmini bull should be asked to contribute whatever money they wish to spend to the district board who should add the necessary amount and purchase a good animal.

35. During the Chief Superintendent's tour he observed in villages poor cows and no bull and immature young males bulling their mothers and sisters. The result is degeneration, disease and losses to owners. It is more expensive to feed and keep poor than good stock.

EQUINES (UNDER LOCAL BODIES).

36. At the close of the year there were 68 horses and pony stallions at work in the non-selected districts which is 2 less than the sanctioned scale. The deficiency is in the Jullundur and Muzaffargarh districts. The produce of these animals is good.

Table X.—Number of horses and pony stallions in the non selected districts.

37. There were 74 donkey stallions at work in the districts during the year which is one short of the sanctioned scale. Eight jacks were indented for and supplied during the year from the Hissar Farm.

Number of donkey stallions in the non selected districts.

38. The statistics for service of stallions are given in Table XI which shows satisfactory results.

Covering registers are now being more carefully kept, and the department is endeavouring to get more information regarding the young stock produced. The shortage of veterinary assistants rather handicaps this, as their time is fully taken up with treatment of diseases and castrations.

Table XII.

39. The expenditure on feed and keep of stallions has increased, which is due to the extra cost of fodder.

FAIRS AND SHOWS.

40. The statistical informations regarding fairs and shows is supplied by the districts concerned,—see Tables XIII and XIV.

Horse shows.

Horse shows were held in six districts during the year.

Imperial medals, which were awarded last year at Delhi, Karnal, Ambala and Gurdaspur, were discontinued on the abolition of the Inspector-General of the Civil Veterinary Department.

Cattle fairs were held in 19 districts. Most of the important shows were attended by an officer of the Department.

Cattle fairs.

OTHER BREEDING OPERATIONS.

41. Out of the balance of 10 merino rams reported in paragraph 24 of the last year's report, 4 still remain.

Eight merino rams and 25 ewes were imported during the year and sent to Kangra. The rams were distributed as follows :—

3 in Kangra, and
5 in Kulu.

Merino sheep-breeding now looks more promising. The sheep-owners have been shown what is necessary. Those who opposed have now been convinced.

Sheep-breeding has been taken up by Hissar, Ferozepore and Montgomery districts. The Hissar district board has introduced the Bikaneri breed. In Ferozepore district the Mamdot Estate has started a flock of Bikaner, and mated them with two half-bred merino rams. The half-bred merino rams were on show at the Jalalabad fair and were generally liked by the people. The Abohar tahsil have now purchased some from the Government Cattle Farm, Hissar.

Arrangements have been made for trying Bikaner rams in the Montgomery district.

Part IV.—Subordinate establishment.

42. The establishment of subordinates at the end of the year was 190 as detailed below :—

Veterinary Inspectors	...	...	...	15
Veterinary Assistants, 1st grade	...	...	...	34
Veterinary Assistants, 2nd grade	...	...	...	70
Veterinary Assistants, 3rd grade	...	...	...	71

This is an increase of 6 men over the previous year. The Department is still in need of more men. The appointment of deputy superintendents and more veterinary inspectors and of assistants is now being considered.

Lectures on breeding have been given to veterinary assistants, as a great deal more will be done by the Department in the future.

Veterinary Inspector Kotu Ram has worked with great energy and zeal. Veterinary Inspectors Fazal Haq, Talib Ali and Janki Nath deserve mention. The veterinary assistants on the whole have worked well. A number of them require to read and keep up to date. Professional books and literatures have been supplied to them for this purpose. A few of the most backward and lazy ones have been sent to the Hissar Farm for 3 months to improve themselves.

The system of examining Veterinary Assistants during the year has had a beneficial effect.

Part V.—Expenditure on the Department.

43. The table No. XIV (a) received from the Accountant-General shows the total expenditure from all sources.

Part VI.—General remarks

44. The question of the veterinary staff being transferred to the district boards has been settled and the staff is to remain provincial.

45. Proposals to augment the staff by 3 Deputy Superintendents and to have one Veterinary Inspector for each district are before Government. It is to be hoped that these appointments will be sanctioned as the Superintendents have their time more than fully occupied. The Superintendents have to work hard to keep the routine work up to date.

46. Cattle-breeding is progressing, but unless the department has extra inspectors, it is impossible for Superintendents to inspect every village and explain to the people what is actually needed. The Superintendents are constantly being consulted on matters regarding breeding, and they are well able to give good advice.

The people have now commenced taking a greater interest in cattle-breeding, as they see from the bulls supplied what can be done by the Department.

47. Grants of land on cattle-breeding terms are being considered. This it is hoped, will give a greater impetus to cattle-breeding. The Chief Superintendent visited the Kaliaana farm, and whatever improvements were necessary were explained to Bhai Hukam Singh the owner.

48. The question of ostrich breeding is under consideration. It is to be hoped that the matter will be carefully considered before being started.

49. Messrs. Woodley and Taylor have worked zealously, and the Chief Superintendent's thanks are due to them for the assistance they have rendered.

50. During the year three officers have been attached to the office of the Chief Superintendent for training.

51. The office establishment worked loyally and creditably. The work of the Head Clerk deserves mention.

ANNUAL REPORT ON THE GOVERNMENT CATTLE FARM, HISSAR.

(A)—REVIEW OF THE CHIEF SUPERINTENDENT.

In consequence of the abolition of the Inspector-General, Civil Veterinary Department, the control of the Government cattle farm was transferred to the provincial government, and is now worked under the Chief Superintendent, Civil Veterinary Department.

The provincial government is fortunate in having a farm of its own, so that it is independent and can supply its bulls and jacks to districts.

The year under report has been remarkable mainly in that for the second year in succession there has been a partial failure of the rains; in consequence very little good grazing has been available and only 1,000 maunds of hay have been collected. The barani crop has been a failure.

The canal supply is insufficient, and an experiment with a tube well for irrigation purposes is to be carried out.

Owing to the excellent system of having rotation crops the cattle have been kept in good health in spite of scarcity conditions.

Owing to the increased demand for bulls for the districts and bullocks for the military department the present sanctioned strength of 1,500 cows will have to be raised to 2,000. This will take time as the work of selection must be done carefully. The percentage of calves born during the year is smaller than it has been for some years; this is due to two famine years in succession.

The object of the farm is to produce the best bulls and jacks and thereby to improve the breeding in the districts. If it were not for this, Government would be unable to procure the number of bulls required for the districts and the jacks would have to be purchased in Europe.

Outbreaks of contagious diseases have occurred during the year, and owing to careful supervision and treatment the mortality has been small.

The present *quasi*-commercial system of charging a nominal price for an animal issued to the district boards in the Punjab, and a higher price for one supplied to another province, prevents the farm from being self-supporting, and the idea of running the farm on commercial lines should therefore be abandoned.

The number of jacks issued is very creditable, and the indents for the Punjab have been fully complied with.

Mules issued to the service during the year were a very fine lot. Mule-breeding in Hissar is a great success, and the mules are admittedly the best bred in India. The foalings during the year have been satisfactory.

Sheep breeding has progressed satisfactorily.

The revision of the farm establishment is now before the Government. Mr. Branford has worked hard and deserves credit for his labours.

(B)—REPORT BY MR. BRANFORD, SUPERINTENDENT.

DURING the year under report the farm was in charge of Lieutenant-Colonel Farmer from April 1st to June 8th, and under my charge for the remainder of the year.

2. On the 1st of April 1912 the farm came under the administrative control of the Punjab Government, consequent upon the abolition of the post of Inspector-General, Civil Veterinary Department. The farm is now worked under the Chief Superintendent, Civil Veterinary Department, Punjab, the Superintendent in executive charge being in the same relation to the Chief Superintendent and the Director of Agriculture and Industries, Punjab, Lahore, as are the Superintendents, Civil Veterinary Department, in charge of North and South Punjab Circles.

3. The farm is up to the present, still being run on the same lines as when under Inspector-General, Civil Veterinary Department. Stock in the shape of siege train bullocks, ordnance and transport mules, and donkey jacks are being issued to the Army Department and stud bulls, donkey jacks and half-bred merino rams to district boards, native states and private buyers. Every endeavour is being made to maintain the stock at the high level of excellence reached while the farm was controlled by the Inspector-General, Civil Veterinary Department, and in this connection it is of advantage that the farm is under the supervision of its late superintendent and still reaps the result of his experience.

4. The year under report has been mainly remarkable, in that for the second year in succession, this district had to face a partial failure of the rains, with the result that good grazing was only available in the Bir during the autumn months. It was impossible to save more than a few 1,000 maunds of hay, and the barani crop was a failure.

Owing to the poor grazing it has again been necessary to stall feed large numbers of stock. As will be seen from the table showing results of the farm cultivation, a very large supply of fodder has been grown and fed to the cattle, and up to the present it has been found possible to maintain the whole herd of stock in health. But the absence of grazing has had one inevitable result; many of the young stock have been retarded in their growth, and will not be ready for issue so early as usual. This is not to be wondered at, as it is largely due to the magnificent quality of the grasses of this district and of this Bir in particular, that the cattle of this district, and specially of this farm owe their pre-eminence among the draught cattle of India.

5. Apart from the grass famine the year has been a successful one. The demand for all classes of stock issued from the farm appears to be on the increase.

The military department have asked for 200 siege train bullocks to be supplied yearly, but with the increased demand for stud bulls it is not possible at present to meet this indent fully.

The difficulty of obtaining suitable mules for mountain batteries is, I believe, as great as ever, and no doubt the military department would take as many animals as the farm can produce, but with the present establishment it is impossible to increase the number of mares for mule-breeding. The demand for mules creates a similar demand for donkey stallions, and last year a record number of these animals were issued, and the indents for this year are likely to exceed largely the number of animals available.

6. The years of scarcity have resulted in comparatively cheap labour and many improvements, especially as regards the cultivation, have been carried out, and provided there is a normal supply of canal water and the rains do not again fail, it is hoped to save sufficient fodder to put the farm into a safe position as regards the next period of scarcity.

7. As regards contagious disease, during the past year the farm has been unusually fortunate except for foot and mouth disease which invaded the herds twice during the cold weather.

The following contagious diseases occurred :—

- (1) *Hæmorrhagic septicæmia* broke out in the rains in the Chaoni Bir. *Hæmorrhagic septicæmia.* The disease occurred only towards the close of long breaks in the rains. The occurrence of a good shower (unfortunately of rare occurrence last year) appeared sufficient to stop the disease.

In my opinion many parts of the Bir adjacent to the canal are contaminated with the organism of hæmorrhagic septicæmia, and after long breaks in the rains when puddles of water are almost dried up, the organism is present in sufficient quantities to form a fatal dose for any susceptible animal drinking; whereas a good fall of rain dilutes the bacilli sufficiently to render them innocuous. The same theory is applicable to outbreaks occurring here in the dry season as the result of floods and leakages from the canal. The organism is probably normally present in the canal water, in a state of dilution so high as to be innocuous, but as the puddles formed by over-flows, etc., dry up, a suitable temperature for reproduction of the organism is produced and also the volume of water is lessened by evaporation, with the result that any animal drinking from such a puddle contracts hæmorrhagic septicæmia. Probably the policy inaugurated last year of preventing canal leakage as far as possible, and preventing access of cattle to low-lying areas liable to receive over-flows, has contributed to our immunity from the disease except in the rains. The disease caused 5 deaths as against 32 last year.

- (2) *Black-quarter* was responsible for 12 deaths as against 6 last year. *Black-quarter.*

- (3) *Strangles*.—Mild outbreaks only have occurred, causing no deaths. *Strangles.*

- (4) *Navel Ill* still occurs, and with the large number of births and the limited staff on the farm, it is almost impossible completely to eradicate it. *Navel Ill.*

- (5) *Foot and mouth disease*, as regards deaths, has been a contributory cause only, but in combination with the grass famine has had serious effects in retarding growth and development. *Foot and mouth disease.*

8. The quinquennial valuation committee met at the close of the year, to value stock, machinery, stores, articles, land buildings, etc. As will be seen by table No. XVI, the committee's deliberations have resulted, combined with increased numbers of stock, in the additions of 1½ lakhs of rupees to the value of live-stock alone. *The quinquennial valuation committee.*

The committee came to the conclusion that the following animals in their prime had increased in value since the committee of 1907, viz.—

		1907.	1913.
		Rs.	Rs.
Siege train bullocks	...	150	260
Supernumerary bulls	...	200	400
Donkey jacks	...	400	700
Ordnance mules	...	400	600

Had all the stock issued been at their prime at the above rates, the receipts of the year would have been increased by over Rs. 30,000.

If these rates be charged in future, and all stock be kept till the age of prime, the farm would become a money-making institution as well as the great factor in the economic progress of the province which it actually is as a source of stud stock.

9. Table XVI gives full information, as to the different kinds of stock and it is necessary to add only a few remarks.

Supernumerary bulls.—Ninety-two were supplied to Punjab district boards, which is a record. Owing to the bad year before referred to it was difficult to get these animals into proper condition for issue, but representatives selecting for district boards seemed unusually well satisfied with the stock presented, and all appeared to go away pleased with their selections. Probably the issue to Punjab district boards this year will be greater still.

Male produce.—These have suffered more severely than any other herd from poor grazing and foot and mouth disease.

Cows.—The number of cows is gradually increasing. The sanctioned strength of 1,500 will soon be reached, but to comply with the increased demand for stud stock and bullocks, sanction for 2,000 will have to be obtained.

Calves.—Only 623 were born during the year, the smallest number for some years. The small number is due to the bad years, many cows not coming into season owing to their poor conditions. This is a provision of nature to help the animals to tide over a period of famine,

Bullocks.—There were 125 siege train bullocks issued to the following :—

To the 1st Division	...	...	...	13
To the 2nd Division	...	...	...	28
To the 3rd Division	...	...	...	16
To the 7th Division	...	...	...	68

Mules.—Twenty-eight were issued to the military department.—

Ordnance	...	...	...	19
Baggage	...	...	...	3
Transport	...	...	...	6

Pony mares.—The percentage of foaling was 48.64. Mares purchased during the year are not included in working out the percentage. A large number of the mares (17) included were purchased during the previous year, and owing to the fact that the best time for getting mares into foal is the spring, most of the mares purchased in 1911-12 could not be got into foal in time to foal before 1913-14. Considering this, the figures are good.

Thirty mares have been examined and found to be in foal,

Donkey stallions.—There were no changes during the year. Owing to the increased number of mares for mule-breeding, it will be necessary to keep at least one more donkey stallion on the farm.

One of the stallions "Calcutta" is now 20 years of age, and it is feared that he will soon become past work.

Donkey colts.—The details of their sales were :—

Donkey colts.

Supplied to Civil Veterinary Department, Punjab	...	...	3
Supplied to North-West Frontier Province	...	...	5
Sold to Native States	...	...	7
			<hr/> 18 <hr/>

Donkey mares.—The percentage of foalings was 70·89. These figures are highly satisfactory taking into consideration the fact that the average period of gestation is 13 months. Forty-five donkey mares have been examined and found in foal.

Sheep.—The sheep have on the whole done well this year; the large number of casualties among lambs was due to the inclement weather combined with poor grazing during January and February when most of the lambs were born.

The experiment of mating a pure bred merino ram with half bred ewes looks like being very successful; a large portion of the lambs have wool almost equal in quality to pure merino, and up to the present they are doing well.

There appears to be a readiness among Indian sheep owners to experiment with cross bred merino rams from the farm, and it is hoped in time to create a regular demand. There is no doubt that the wool of the country sheep can be improved by crossing with the merino, and if sheep owners can be induced to persevere with the use of improved farm-bred rams, they will add considerably to the pecuniary value of their flocks.

10. *Cultivation.*—In spite of the small rainfall and poor supply of canal water available during June, unusually large supplies of fodder were sown. That this was possible was due to the fact that labour was comparatively cheap and plentiful, enabling large areas of commanded land to be got under cultivation.

For the same reasons it was found possible to continue the work of improving the cultivated lands by jungle clearance, protection by thorn fencing, making water-courses and levelling.

Much more work of this kind could be carried out in these years of scarcity, were it not for the fact that much of the extra labour obtainable is always occupied with the work involved in stall feeding the stock. Fodder for this purpose had often to be carted long distances, taking up the whole time of the men, carts and bullocks employed.

Mr. MacCutchan, the Farm Bailiff, worked hard throughout the year to meet the demands made on him for fodder.

11. *Hospital.*—During the year excluding the outbreaks of contagious disease noted above the veterinary staff treated on an average 54 cases daily, and performed 54 castrations. The following veterinary assistants of the Punjab cadre were attached to the farm for courses of training in practical work :—

Veterinary Assistant Ata Muhammed from 2nd January 1913 to 24th March 1913,

Veterinary Assistant Faiz Ali from 11th March 1913.

The training of these men involved some additional work, but as a set-off to this the farm had the benefit of their services and in many ways they were able to make themselves useful. The work of Veterinary Assistants Ghulam Hussain and Muhammad Ashfaq was as usual very satisfactory.

12. *General.*—The year has again been a very anxious one for the whole staff. Much credit is due to the Farm Overseer, Captain R. Morris, for hard work throughout the year.

The work of the clerical staff has been satisfactory.

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TABLE I.

STATEMENT SHOWING THE MAIN RESULTS OF THE PUNJAB VETERINARY COLLEGE, LAHORE, FOR THE YEAR 1912-13.

(See Punjab Veterinary College Report)

Name of the institution.	Name of the course of instruction if more than one followed.	NUMBER OF STUDENTS								STUDENTS ADMITTED DURING THE YEAR, CLASSED BY EDUCATIONAL QUALIFICATIONS.			RECEIPTS.			EXPENDITURE.			EMPLOYMENT OF GRADUATES WHO PASSED OUT DURING THE THREE YEARS PRECEDING.					REMARKS.
		Admitted during the year, beginning April 1912.		Failed to pass the final examination.		Remaining under instructions at the end of the year.		Instructions prolonged by reason of failure to pass.	Matriculated or with higher qualifications.	Knowing some English, but not articulated.	Knowing no English or very little English.	From fees.	From other sources.	Total.	Salaries of instructing staff.	Other expenses.	Total.	Total number passed.	In service of Government or local bodies.	In service of other States, bodies and institutions.	In private practice.	Number unemployed.		
		Scholarship-holders.	Military students and others.	Passed final examination during the year ending April 1913.	Failed to pass the final examination.	In ordinary course.																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Punjab Veterinary College.	Diploma or three years' course in Urdu.	12	40	*62	†9	101	19	2	22	28	Rs. 7,957	Rs. 6,048	Rs. 14,005	Rs. 57,582	Rs. 34,595	Rs. 90,177	184	171	13	...	...	...

*Six passed in June 1912.

†One failed in one subject only.

TABLE II

SHOWING NUMBER OF DEATHS FROM CONTAGIOUS DISEASES AMONGST ANIMALS DURING THE YEAR 1912-13.
(See Civil Veterinary Department Report, paragraphs 2-11 and 13.)

DISTRICT.	EQUINES.					BOVINES.					OTHERS.					REMARKS.				
	Glanders.	Anthrax.	Surra.	Dourine.	Other contagious diseases.	Total.	Rinderpest.	Foot and mouth disease.	Hæmorrhagic sep- ticæmia.	Blackquarter.	Anthrax.	Other contagious diseases.	Total.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Hissar	..	..	1	..	..	1	167	24	448	267	..	..	906	7	28	..	..	..	39	..
Rohtak	..	..	..	..	..	..	131	51	887	181	..	..	1,250	11	..	..	..	..	11	..
Gurgaon	..	..	..	..	1	1	326	56	365	62	..	2	811	..	..	..	..	76	76	..
Delhi	..	..	..	..	..	4	31	21	187	40	..	..	279	10	..	..	..	..	10	..
Karnal	4	..	..	..	..	..	1,41	32	704	..	..	..	2,147	75	..	..	..	..	75	..
Kanpur	..	..	..	..	..	..	174	5	324	13	..	..	516	9	..	..	..	..	9	..
Ambala	..	..	..	..	..	3	12	..	..	..	..	..	12	..	..	..	..	..	..	..
Simla	3	..	..	..	..	..	384	3	77	..	..	..	464	..	..	..	..	256	256	..
Kangra	13	1	..	..	..	13	496	..	389	..	..	..	885	..	1	6	..	..	6	..
Hoshiarpur	..	..	..	..	..	1	570	14	236	..	..	..	820	..	..	1	..	..	2	..
Jullundur	..	..	..	..	..	..	78	7	242	..	..	..	327	1	..	..	..	94	96	..
Ludhiana	1	..	..	..	..	1	36	1	130	..	..	..	167	..	20	..	..	..	20	..
Ferozepore	..	..	..	..	..	..	561	8	228	..	..	12	303	..	..	..	..	..	30	..
Lahore	2	..	1	..	..	3	539	3	444	..	..	6	1,014	..	6	..	..	..	4	..
Amritsar	5	..	1	..	..	6	1,087	..	431	..	..	79	1,239	4	..	..	..	..	23	..
Gurdaspur	..	..	..	..	..	1	1,655	..	950	..	..	95	2,701	23	..	..	..	15	25	..
Sialkot	..	..	1	..	15	15	577	13	147	..	..	..	737	10	..	..	..	..	..	..
Gujranwala	..	..	..	..	..	..	976	5	1,010	31	..	21	2,043	62	..	46	89	734	829	..
Gujrat	..	..	..	..	..	..	518	13	161	95	..	53	840	..	21	..	..	721	844	..
Shahpur	..	..	..	..	..	..	31	36	112	20	..	4	203	..	10	..	..	150	10	..
Jhelum	..	..	..	..	..	1	489	20	139	144	..	22	705	..	..	..	..	2,100	150	..
Rawalpindi	1	..	..	..	..	..	41	..	46	..	..	13	193	17	..	..	..	5	2,117	..
Attock	..	..	..	..	..	..	155	..	411	7	..	..	208	..	..	..	..	..	5	..
Mianwali	..	..	..	..	..	..	414	1	322	..	..	2	833	..	..	..	..	75	..	..
Montgomery	..	..	..	..	..	..	1,049	31	237	..	..	35	1,322	5	..	..	..	..	80	..
Lyallpur	..	..	..	..	..	..	379	4	137	8	..	..	528	11	..	..	..	..	11	..
Jhang	..	..	..	..	..	..	560	1	32	..	..	..	593	15	..	..	..	..	15	..
Multan	..	..	21	..	..	21	15	8	102	..	..	..	125	108	..	..	..	..	108	..
Muzaffargarh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dera Ghazi Khan	..	..	..	..	..	..	12,924	323	8,676	868	..	406	23,197	338	87	53	89	4,260	4,857	..
Total	29	1	25	..	16	71	..	..	5	12	..	..	17	..	..	..	..	..	..	..
Government Cattle Farm, Hissar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

NOTE.—The figures for equines relate only to non-selected districts, the municipality of Lahore and the Rawalpindi-Kohala road, except where cases are treated in veterinary hospitals and dispensaries in selected districts.

TABLE III.

SHOWING RESULTS OF PREVENTIVE INOCULATION DURING THE
YEAR 1912-13.

(See Civil Veterinary Department Report, paragraphs 10, 14 and 15).

District.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	NUMBER OF ANIMALS WHICH DIED UNINOCULATED IN COURSE OF OUTBREAK.			NUMBER OF ANIMALS INOCULATED.			NUMBER OF ANIMALS WHICH DIED AFTER INOCULATION.			REMARKS.
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Hissar	Rinderpest.	Serum alone.	2	..	26	..	..	165	..	..	..	..
Rohtak			1	..	..	..	..	24	..	..	..	..
Gurgaon			4	..	99	..	..	212	..	..	..	..
Karnal			6	..	155	..	..	663	..	..	..	..
Ambala			2	..	28	..	..	61	..	..	..	..
Kangra			28	..	162	..	..	733	..	..	1	..	
Hoshiarpur			21	..	462	..	..	2,491	..	..	6	..	
Jullundur			20	..	366	..	..	1,290	..	..	4	..	
Ferozepore			3	..	13	..	..	280	..	..	3	..	
Lahore			1	..	30	..	..	57	..	..	..	..
Amritsar			6	..	381	..	..	437	..	..	4	..	
Gurdaspur			14	..	418	..	..	1,983	..	..	1	..	
Sialkot			26	..	672	..	..	2,374	..	..	8	..	
Gujranwala			10	..	93	..	..	1,507	..	..	5	..	
Mianwali			1	..	15	..	..	195	..	..	..	..
Lyallpur			2	..	15	..	..	63	..	..	..	..
Jhang			4	..	155	..	..	418	..	..	2	..	
Multan			21	..	195	..	..	609	..	..	..	..
Muzaffargarh			25	..	366	..	..	4,773	..	..	33	..	
Total	..	..	197	..	3,651	..	..	18,335	..	..	67	..	
Rohtak	Hæmorrhagic septicæmia.	Serum alone.	1	..	29	..	..	169	..	..	..	..
Ferozepore			1	..	19	..	..	10	..	..	..	..
Jullundur			2	..	6	..	..	240	..	..	..	..
Hoshiarpur			3	..	11	..	..	355	..	..	..	..
Lahore			1	..	35	..	..	130	..	..	..	..
Gurdaspur			1	..	40	..	..	139	..	..	..	..
Total	..	..	9	..	140	..	..	1,043	..	..	..	..
Lahore	Hæmorrhagic septicæmia.	Vaccine alone.	1	..	..	..	..	47	..	..	..	..
Shahpur			6	..	..	..	..	100	..	..	..	..
Jhelum			3	..	..	..	..	322	..	..	..	..
Rawalpindi			1	..	..	..	..	186	..	..	..	..
Attock			2	..	..	..	..	213	..	..	..	..
Mianwali			14	..	..	..	..	464	..	..	..	..
Total	..	..	27	..	..	..	..	1,332	..	..	..	..
Rawalpindi	Black-quarter.	Blacklegged vaccine.	8	..	..	..	..	299	..	..	..	..
Attock			1	..	..	..	..	82	..	..	..	..
Total	..	..	9	..	..	..	..	381	..	..	..	..
Government Cattle Farm, Hissar...	Black-quarter.	Blacklegged vaccine.	..	..	..	..	..	712	..	..	12	..	

TABLE IV

SHOWING THE NUMBER OF ANIMALS TREATED AND CASTRATED BY VETERINARY ASSISTANTS ON TOUR DURING 1912-13.

(See Civil Veterinary Department Report, paragraphs 21 and 22.)

District.	1	Number of villages visited.	Number of Veterinary Assistants employed.	CASTRATIONS PERFORMED.				TREATED FOR CONTAGIOUS DISEASES.				TREATED FOR NON-CONTAGIOUS DISEASES.				REMARKS.	
				Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.		
Hissar	...	463	6	3	2	...	5	31	2,278	447	2,756	166	937	578	1,681	4,442	17
Rohtak	...	291	6	10	125	...	139	44	971	101	1,116	143	916	126	1,185	2,439	
Gurgaon	...	623	7	13	79	...	92	60	3,102	8	3,170	117	1,307	36	1,460	4,722	
Delhi	...	332	2	17	70	...	97	23	407	19	451	130	1,226	22	1,378	1,926	
Karnal	...	373	5	30	65	...	95	30	1,001	...	1,081	358	1,735	52	2,145	3,271	
Ambala	...	424	6	37	134	...	150	44	585	44	673	210	1,201	70	1,481	2,334	
Simla	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra	...	385	7	7	...	...	7	39	761	300	1,099	377	1,434	394	2,205	3,311
Hoshiarpur	...	391	5	10	62	...	88	4	394	...	398	140	360	6	506	992	
Jullundur	...	275	5	...	41	...	42	...	714	...	714	72	309	12	393	1,149	
Ludhiana	...	555	4	9	65	...	75	...	403	6	429	180	1,204	17	1,401	1,905	
Ferozepore	...	297	6	15	68	...	85	...	1,122	60	1,183	327	797	159	1,283	2,551	
Lahore	...	420	4	23	416	...	439	...	220	2	223	201	868	29	1,098	1,760	
Amritsar	...	408	5	4	114	...	118	...	571	4	596	275	1,348	81	1,704	2,418	
Gurdaspur	...	506	5	32	150	...	194	...	497	19	537	287	942	90	1,319	2,050	
Sialkot	...	422	6	1	...	...	1	...	483	1	485	142	646	16	804	1,290
Gujranwala	...	399	6	1	...	...	39	...	340	4	372	223	741	52	1,016	1,427
Gujrat	...	323	4	7	24	...	31	...	1,583	4	1,590	266	338	7	661	2,282	
Shahpur	...	377	5	19	14	...	39	...	547	26	577	115	146	75	386	952	
Jhelum	...	261	4	14	37	...	52	...	393	1,069	1,478	197	218	92	507	2,037	
Rawalpindi	...	370	5	8	5	...	14	...	672	15	687	204	168	43	415	1,116	
Attock	...	318	5	5	13	...	18	...	979	475	1,454	132	237	61	430	1,902	
Mianwali	...	170	4	65	90	...	150	...	190	24	219	229	438	119	786	1,155	
Montgomery	...	319	5	4	54	...	58	...	441	2	468	271	868	41	1,180	1,706	
Lyallpur	...	214	4	11	26	...	38	...	179	...	179	174	418	3	595	835	
Jhang	...	263	4	...	19	...	20	...	664	49	719	334	540	96	970	1,709	
Multan	...	301	6	...	45	...	45	...	3,721	50	3,778	399	1,321	198	1,918	5,741	
Muzaffargarh	...	253	5	...	90	...	92	...	456	25	557	114	566	516	1,196	1,845	
Dera Ghazi Khan	...	215	5	11	5	...	16	...	1,700	850	2,606	630	752	145	1,527	4,149	
Total	...	9,948	142	349	1,851	68	2,268	587	25,377	3,604	29,568	6,413	22,031	3,136	31,580	63,416	

TABLE V

SHOWING NUMBER OF ANIMALS TREATED AT VETERINARY HOSPITALS AND DISPENSARIES DURING THE YEAR 1912-13.

(See Civil Veterinary Department Report, paragraph 24.)

District.	Number of veterinary dispensaries	Number of Veterinary Assistants employed at dispensaries	IN-PATIENTS.						OUT-PATIENTS.						TOTAL NUMBER OF IN AND OUT PATIENTS TREATED DURING THE YEAR.				Receipts.	Expenditure.									
			Remaining on 1st April 1912		Admitted during the year		Total	Discharged during the year.			Number treated during the year.		Average daily attendance		Equines.	Bovines.	Other animals	Total.											
			Equines.	Bovines.	Other animals.	Equines.		Bovines.	Other animals.	Equines.	Bovines.	Other animals.	Equines.	Bovines.							Other animals.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Hissar	5	5	2	2	2	221	235	29	223	239	31	217	237	31	6	2	..	1,787	5,244	2,998	18,92	42,38	98	2,004	5,451	3,029	10,514	Rs.	Rs.
Rohitak	4	4	3	3	3	269	247	6	272	219	6	272	247	6	..	..	..	2,789	6,379	895	12,69	42,49	751	2,061	6,623	901	10,588	170	8,215
Gurgaon	6	6	4	4	4	185	124	29	169	124	30	166	123	30	3	1	..	2,787	6,783	2,494	20,9	35,64	1551	2,903	6,856	2,514	12,273	153	6,666
Delhi	1	1	2	2	2	175	137	65	177	107	65	174	104	60	3	3	5	2,631	2,703	1,244	24,56	16,14	11,52	2,805	2,807	1,304	6,916	D B {	469
Karnal	4	4	..	1	1	151	67	6	151	68	6	143	67	6	8	1	..	1,885	2,582	643	22,83	23,00	876	1,978	2,649	649	5,270	M. C {	2,204
Ambala	5	5	1	1	1	254	243	16	255	244	16	255	241	16	..	3	..	3,283	7,696	1,944	24,1	48,35	12,83	3,538	7,937	1,960	13,455	444	7,070
Simla	2	2	..	..	..	68	2	108	68	2	108	64	2	106	4	..	2	338	32	448	3,53	19	3,69	402	34	554	332	5,114	2,294
Kangra	5	5	5	5	5	129	28	4	134	28	4	134	29	4	3	1	..	2,046	7,010	2,033	18,54	27,29	8,18	2,180	7,038	2,037	11,255	361	4,486
Hoshiarpur	4	4	1	1	1	236	235	21	237	225	24	234	224	24	3	1	..	4,799	5,546	1,405	24,32	28,99	8,53	5,093	5,770	1,423	12,232	169	4,288
Jullundur	4	4	5	5	5	355	535	42	350	565	42	354	505	41	6	..	1	5,484	10,933	2,789	27,01	65,84	16,36	5,838	11,503	2,890	20,171	409	3,232
Ludhiana	3	3	2	2	2	275	427	24	277	429	24	274	422	23	3	7	1	1,781	4,779	2,308	15,02	34,76	17,92	2,055	6,201	2,331	9,587	825	2,707
Ferozepore	5	5	6	6	6	236	207	100	242	209	101	241	207	100	2	2	1	3,274	6,780	1,680	21,18	40,37	8,16	3,515	6,937	1,780	12,232	2,338	3,580
Lahore	3	3	2	2	2	285	98	16	287	98	16	285	97	16	2	1	..	2,644	2,709	859	16,31	17,0	5,71	2,929	2,903	875	6,610	111	1,882
Amritsar	4	4	3	3	3	300	99	18	303	99	18	301	97	18	2	2	..	4,077	5,015	1,364	15,30	19,0	4,15	4,378	5,112	1,382	10,972	D B {	1,716
Gurdaspur	4	4	6	6	6	374	194	15	380	194	15	376	194	15	4	..	..	3,305	7,647	1,724	29,26	28,4	8,3	6,681	7,841	1,740	16,262	M C {	7,128
Sialkot	5	5	3	3	3	177	89	20	180	90	27	175	90	27	5	..	..	4,407	8,542	1,775	27,59	38,4	9,30	4,582	8,032	1,802	15,010	291	4,483
Gujranwala	5	5	5	5	5	286	156	46	298	137	46	296	186	46	2	1	..	3,782	6,037	1,648	25,2	32,63	10,3	4,078	6,223	1,94	11,995	207	3,608
Gujrat	3	3	3	3	3	165	52	4	165	52	4	165	52	4	..	..	..	3,826	3,269	759	23,77	20,31	5,08	3,991	3,341	763	8,075	357	4,897
Shahpur	4	4	5	5	5	203	66	32	208	64	32	207	65	31	1	1	1	3,826	2,473	1,352	24,39	14,12	12,19	2,680	1,844	1,383	5,907	38	1,491
Jhelum	3	3	1	1	1	95	11	8	96	11	9	95	11	9	1	1	..	1,556	1,335	546	15,71	10,37	5,81	1,651	1,346	555	3,552	90	4,416
Rawalpindi	4	4	..	1	1	254	50	70	254	51	71	253	50	71	1	1	..	2,390	1,407	1,135	30,79	13,07	11,04	2,643	1,457	1,206	5,306	D B {	2,530
Attock	4	4	..	..	..	45	18	5	45	18	5	45	18	5	..	..	..	2,048	2,347	822	18,21	19,18	5,99	2,093	2,365	827	5,285	Murree {	4,861
Mianwali	4	4	4	4	4	113	31	8	117	32	8	115	31	8	2	1	..	1,695	2,274	715	13,18	19,59	6,90	1,810	2,405	723	4,838	8	712
Montgomery	4	4	..	1	..	166	34	11	166	34	11	166	34	11	7	3	..	2,925	3,050	1,030	21,87	10,12	6,15	3,091	1,729	1,041	5,861	31	2,405
Iyallpur	3	3	5	2	..	274	172	5	279	174	5	272	171	5	..	3	..	3,458	3,050	947	22,99	23,03	6,2	3,740	3,221	952	7,913	5	4,030
Jhang	3	3	..	..	..	124	41	8	124	41	8	124	41	8	..	..	..	2,032	1,434	512	16,04	11,12	3,99	2,156	1,475	520	4,151	432	7,271
Multan	5	5	3	3	3	216	80	29	219	80	29	214	77	29	5	3	..	3,808	3,865	1,703	23,94	21,59	11,48	4,017	3,942	1,732	9,691	69	3,882
Muzaffargarh	4	4	5	5	5	252	147	47	252	147	47	251	147	47	1	..	..	4,472	5,628	3,825	30,26	25,7	12,32	4,753	3,942	1,732	14,400	371	11,007
D. G. Khan	4	4	..	..	..	106	31	7	106	31	7	105	31	7	1	..	..	5,202	2,643	1,698	50,62	23,76	14,68	5,307	2,674	1,705	9,686	90	6,027
Total	113	113	68	19	8	6,006	3,875	808	6,074	3,894	816	6,003	3,859	806	71	35	11	89,889	127,048	43,285	..	..	..	95,892	130,907	44,090	270,889	19,551	1,38,277
Government Cattle Farm, Hissar	1	2	4	28	1	147	425	63	151	453	64	139	431	61	12	22	3	203	89	75	6	2	4	354	542	139	1,035		

TABLE VII
SHOWING TOTAL STRENGTH OF SUBORDINATE VETERINARY STAFF
EMPLOYED DURING THE YEAR 1912-13.

(See Civil Veterinary Department Report, paragraph 42.)

Province.	How occupied.	Whether paid from provincial or local funds.	Veterinary Inspectors	Veterinary Assistants.	Subordinate staff not included in previous columns.	REMARKS.
1	2	3	4	5	6	7
			No.	No.		
	In Schools and Colleges...	...	...	.	...
	In Dispensaries	..	15	115	...	
	On other work	...	...	*60	...	* 29 Itinerating Veterinary Assistants. 5 Office Veterinary Assistants. 2 Tonga line. 24 Reserve.
	Total	...	15	175		60

TABLE VIII.
RETURN OF STUD BULLS FOR THE YEAR 1912-13.
(See Civil Veterinary Department Report, paragraph 32.)

District.	PROPERTY OF LOCAL BODIES.					REMARKS.
	Number on 1st April 1912.	Obtained during the year.		Casualties during the year.	Balance remaining on 31st March 1913.	
		Number.	Average price paid			
1	2	3	4	5	6	7
Hissar	51	10	Rs 200	4	57	*Includes 3 transferred from Delhi †Includes 6 transferred from Delhi.
Rohtak	*11	1	...	1	11	
Gurgaon	21	6	200	2	25	
Karnal	24	5	200	...	29	
Ambala	22	4	200	2	24	
Kangra	12	...	...	1	11	
Hoshiarpur	34	4	200	2	36	
Jullundur	24	4	200	2	26	
Ludhiana	19	3	200	1	21	
Ferozepore	55	5	222	8	52	
Lahore	38	20	200	115	43	:14 Sold to zaildars, &c.
Amritsar	9	4	246	1	12	
Gurdaspur	33	6	200	7	32	
Sialkot	5	4	200	...	9	
Gujranwala	83	...	...	...	83	
Gujrat	15	2	200	1	16	
Shahpur	5	2	165	1	6	
Jhelum	1	1	200	1	2	
Rawalpindi	4	1	255	...	4	
Attock	2	3	198	1	4	
Mianwali	14	...	...	3	11	
Montgomery	18	8	200	1	25	
Lyallpur	49	6	92	12	43	
Jhang	2	1	200	1	2	
Multan	...	4	200	1	3	
Muzaffargarh	8	...	...	1	7	
Total	509	104	...	69	544	

TABLE X.

RETURN OF HORSE, PONY AND DONKEY STALLIONS UNDER LOCAL BODIES FOR THE YEAR 1912-13.
(See Civil Veterinary Department Report, paragraphs 36 and 37).

Details.	HORSE AND PONY STALLIONS UNDER LOCAL BODIES.													DONKEY STALLIONS UNDER LOCAL BODIES.									
	Horses.								Forses.					Total horses and ponies.									
	Horses.								Forses.					Total horses and ponies.									
	Arab.	Persian.	Country-bred.	Total.	...	Arab.	Persian.	Country-bred.	12	13	14	15	16	17	18	19	20	Total.
Balance on 1st April 1912 ...	3	...	...	...	...	3	59	...	4	...	...	...	...	...	63	66	1	9	38	...	18	7	73
Increase { Purchased in India	1	...	...	...	...	1	4	...	1	...	...	...	...	...	5	6	...	...	8	...	...	...	8
Received from ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	4	...	...	...	...	4	63	...	5	...	...	...	...	...	68	72	1	9	46	...	18	7	81
Decrease { Died	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	1	...	2	...	...	...	3
Sold	...	...	...	...	...	...	3	...	...	...	...	...	...	...	3	3	...	1	3	...	...	...	4
Destroyed	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Transferred to ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Decrease	...	...	...	...	...	...	4	...	...	...	...	...	...	...	4	4	1	1	5	...	...	...	7
Balance on 31st March 1913	4	...	...	...	...	...	4	59	...	5	...	...	...	...	64	68	...	8	41	...	18	7	74
Total	4	...	...	...	...	...	4	59	...	5	...	...	...	...	64	68	...	8	41	...	18	7	74

TABLE XI.

SERVICES AND PRODUCE OF EACH CLASS OF HORSE PONY AND DONKEY STALLIONS, UNDER LOCAL BODIES, DURING 1912-13.

(See Civil Veterinary Department Report, paragraph 38.)

Horse, pony or donkey	District.	Stallions on register on 31st March 1913	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED		AVERAGE NUMBER OF MARES COVERED PER STALLION EMPLOYED AT STUD		REMARKS.
			Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	
1	2	3	4	5	6	7	8	9	10
Horse	Punjab	4	3	4	156	228	52	57	
	Total	4	3	4	156	228	52	57	
Pony	Punjab	64	64	59	3,586	3,400	56.9	58	
	Total	64	64	59	3,586	3,400	56.9	58	
Donkey	Punjab	74	72	72	3,278	3,453	46.7	48	
	Total	74	72	72	3,278	3,453	46.7	48	

TABLE XII

SHOWING AVERAGE COST OF FEED, KEEP, ATTENDANCE, ETC., OF HORSE, PONY AND DONKEY STALLIONS DURING THE YEAR 1912-13.

(See Civil Veterinary Department Report, paragraph 39.)

District	HORSE		PONY		DONKEY		REMARKS
	Year under report.	Previous year.	Year under report	Previous year	Year under report	Previous year.	
1	2	3	4	5	6	7	8
	Rs	Rs	Rs	Rs	Rs	Rs	
Hissar	...	...	380	420	223	210	
Rohtak	...	...	310	329	195	196	
Gurgaon	...	...	231	290	140	154	
Karnal	...	...	375	314	200	178	
Ambala	...	328	356	310	219	195	
Kings	...	...	...	...	225	...	
Hoshiarpur	328	312	349	331	171	168	
Jullundur	...	...	318	282	193	182	
Ludhiana	...	...	343	324	208	189	
Gurdaspur	...	...	351	314	199	170	
Sialkot	...	...	339	306	192	193	
Mianwali	...	...	269	324	232	184	
Montgomery	...	...	317	325	147	178	
Muzaffargarh	383	330	355	330	338	225	
Delhi	...	...	...	331	...	183	
Total	711	970	4,293	4,530	2,882	2,605	
Average	355	323	330	323	206	186	

TABLE XIV.

ABSTRACT OF PARTICULARS REGARDING CATTLE FAIRS AND SHOWS HELD DURING THE YEAR 1912-13.

(See Civil Veterinary Department Report, paragraph 41.)

Name of fair.	Number of cattle fairs and shows held.	TOTAL NUMBER OF STOCK PRESENT.								AVERAGE PRICE OF ANIMALS SOLD.					Amount realized in fees on sales of cattle.	Total number of animals that competed for prizes.	PRIZE-MONEY PROVIDED.						Number of medals awarded.	REMARKS.
		Bulls.	Bullocks.	Cows.	Young stock.	Buffaloes.	Camels.	Others.	Bulls.	Bullocks.	Cows.	Buffaloes.	Camels.	From Imperial Funds.			From Provincial Funds.	From Local Funds.	From other sources.	Total.	Amount actually awarded.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Hisar	6	...	55,182	2,418	13,891	3,713	3,058	1,939	...	...	...	...	...	Rs. 48,671	364	...	...	Rs. 1,538	...	Rs. 1,538	839	3	...
Rohtak	1	...	63,097	4,647	...	10,827	472	2,264	...	59	33	...	...	Rs. 32,678	42	...	...	524	...	524	519	...	...
Gurgaon	2	...	11,755	1,043	6,140	294	7	220	...	...	...	...	...	Rs. 6,676	104	...	...	504	...	504	437	...	...
Ambala	1	...	57	17	5	34	...	13	...	...	...	...	...	...	66	...	...	270	...	270	188	...	...
Jallundar	1	...	1,851	2,101	3,924	6,184	35	1,099	...	16	16	33	75	...	90	...	...	425	...	425	425	...	...
Ferozepore	4	...	5,682	2,097	4,982	3,859	3,073	1,320	...	...	...	...	...	Rs. 3,719	743	...	...	1,921	...	1,921	425	...	...
Lahore	1	...	474	319	426	535	49	824	...	31	21	32	69	Rs. 10,331	70	...	...	500	...	500	267	1	...
Amritsar	2	...	...	Not reported.	...	...	...	...	18	22	17	26	92	Rs. 34,312	711	...	...	2,900	...	2,900	2,879	...	...
Gurdaspur	1	...	4,166	2,550	1,139	4,750	6	177	...	11	9	20	...	Rs. 1,387	79	...	...	500	...	500	286	...	...
Sialkot	1	...	1,345	7,377	3,677	6,216	13	380	...	26	18	30	...	Rs. 5,315	69	...	...	300	...	300	289	...	...
Gufranwala	2	...	3,258	2,451	1,502	7,176	15	843	...	39	31	59	67	Rs. 1,277	189	...	...	700	...	700	540	...	...
Gufrat	1	...	132	108	32	119	...	...	...	...	20	48	...	...	439	...	...	650	...	650	630	...	...
Shahpur	2	...	258	104	30	167	...	...	...	...	22	38	50	Rs. 105	4	...	...	600	...	600	600	...	...
Rawalpindi	2	...	1,824	41	...	18	24	...	...	...	22	83	...	Rs. 777	419	...	...	457	...	457	446	...	...
Attock	3	...	294	125	...	...	...	...	...	163	47	91	...	Rs. 20	1,042	...	...	1,097	...	1,097	1,080	...	...
Montgomery	1	...	84	190	...	...	...	...	...	...	48	...	...	Rs. 4	260	...	...	406	...	406	376	...	...
Lyalpur	1	...	1,685	2,403	38	...	...	...	...	...	...	...	...	Rs. 4,331	115	...	...	920	...	920	760	...	...
Multan	1	...	23	10	...	...	...	...	...	...	...	...	...	...	77	...	...	200	...	200	200	...	...
Muzaffargarh	1	...	30	14	...	...	...	...	...	...	...	...	...	...	349	...	...	200	...	200	195	...	...
Total	34	1,070	1,42,897	28,013	38,332	47,046	7,656	11,941	442	528	296	530	550	1,50,999	5,819	...	14,612	100	14,712	12,856	15	...	...

TABLE XIV—A.

STATEMENT SHOWING COST OF THE CIVIL VETERINARY DEPARTMENT
DURING THE OFFICIAL YEAR IN THE PROVINCE OF PUNJAB.

(See Civil Veterinary Department Report, paragraph 44.)

MAJOR HEADS.	AMOUNT.				REMARKS.
	Imperial.	Provincial	Local.	Total.	
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	
Superintendence	45,081	32,850	...	77,931	
Veterinary instruction . . .	42,856	34,897	2,943	80,696	
Subordinate establishment ...	...	92,421	26,938	1,19,359	
Hospitals and dispensaries ...	...	14,599	77,767	92,366	
Breeding operations	1,644	4,979	1,11,076	1,17,699	
Prizes ... ..	...	...	10,882	10,882	
Fairs and shows ... ..	...	9,435	67,991	77,426	
Contribution to local bodies for veterinary charges ...	...	1,04,000	...	1,04,000	
Total	89,581	2,93,161	2,97,597	6,80,339	

TABLE VIA.
EXPENDITURE BY LOCAL BODIES.

District.	1	HOSPITAL CHARGES.						BREEDING OPERATIONS.						FAIRS AND SHOWS.				REMARKS.					
		Stipends.	Pay of compounders and menials.	Cost of medicines and instruments.	Expenditure on buildings and repairs.	Furniture.	Contingencies.	Total.	Bulls.		Horses and ponies.		Donkeys.		Total.	Horse fairs.			Cattle fairs.		Total.	Grand Total of columns 2, 9, 15 and 20.	
									Purchase.	Upkeep.	Purchase.	Upkeep.	Purchase.	Upkeep.		Purchase.	Upkeep.		Purchase.	Upkeep.			Purchase.
Hissar	...	Rs. 120	793	1,376	5,694	8	Rs. 344	8,215	Rs. 2,000	...	Rs. 1,900	1,116	Rs. ...	7,966	Rs. 134	...	Rs. ...	839	19,462*	Rs. 20,435	36,736	21	Rs. 36,736
Rohtak	...	96	847	1,414	4,405	...	...	6,666	45	...	1,882	780	...	2,687	...	...	...	519	4,812	6,331	14,780	20	Rs. 14,780
Gurgaon	...	262	1,049	1,245	14,031	259	184	16,768	1,277	105	...	421	...	3,234	...	...	...	437	279	716	20,950	21	Rs. 20,950
Delhi	199	192	62	...	6	459	...	...	763	213	...	976	...	...	...	...	...	...	...	...	...
Delhi Municipal Committee	493	368	326	...	1,017	2,204	1,000	82	...	1,398	...	5,104	...	...	...	...	...	...	...	...	...
Karnal	...	420	442	971	242	201	214	2,070	800	50	...	1,145	...	5,462	713	...	1,804	188	260	2,965	7,494	21	Rs. 7,494
Amthal	951	1,547	2,404	143	69	5,114	...	...	2,150	...	...	...	...	...	...	...	...	...	...	...	...
Sirsa	...	386	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sirsa Municipal Committee	507	150	286	...	...	5,644	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra	...	96	326	1,271	2,889	...	...	4,486	...	2	1,500	225	...	1,727	...	...	...	...	...	...	...	...	...
Hoshiarpur	819	877	2,307	199	86	4,288	800	85	...	1,368	...	3,629	...	...	...	...	...	...	...	...	...
Jullundur	1,062	1,649	521	...	...	3,232	800	...	...	955	...	2,526	157	...	...	425	1,439	2,021	5,758	21	Rs. 5,758
Jullundur Municipal Committee
Ludhiana	...	108	1,044	784	761	61	57	2,707	600	147	...	2,492	...	4,611	...	...	...	...	...	...	...	...	...
Benares	...	72	963	1,353	1,020	68	186	3,580	1,335	...	...	...	...	3,804	599	...	312	703	1,723	2,426	9,882	21	Rs. 9,882
Benares Municipal Committee	559	1,329	2,799	2,799	21	Rs. 2,799
Abohar	...	96	602	800	220	...	...	1,882	4,000	368	...	...	...	...	...	...	...	618	800	1,418	1,418	21	Rs. 1,418
Amritsar	...	192	542	833	238	...	53	1,716	800	128	660	3,263	...	4,851	90	...	...	267	924	1,280	7,537	21	Rs. 7,537
Amritsar Municipal Committee	...	240	732	464	5,180	132	620	7,128	330	...	...	308	...	638	100	...	...	...	...	20,570	28,576	21	Rs. 28,576
Guaraspur	...	72	829	1,417	1,960	170	107	4,483	1,200	290	...	2,807	...	5,687	287	...	955	286	...	1,528	11,770	21	Rs. 11,770
Shikot	...	120	1,063	1,668	563	135	189	3,608	919	10	...	2,036	...	4,320	...	...	...	...	...	10,722	18,770	21	Rs. 18,770
Gujranwala	...	216	1,103	2,427	2,427	249	138	4,897	...	50	1,700	3,492	...	5,242	300	...	2,701	540	783	4,324	14,679	21	Rs. 14,679
Gujrat	...	240	565	397	176	158	195	1,491	1,000	74	...	1,437	...	2,511	200	...	464	650	200	4,324	5,766	21	Rs. 5,766
Shahpur	...	84	598	616	2,979	80	143	4,416	330	27	...	3,293	...	3,650	243	...	1,465	600	...	2,308	10,468	21	Rs. 10,468
Jhelum	...	92	546	489	1,225	...	330	2,590	...	...	...	1,168	...	1,168	...	...	...	...	...	...	...	...	...
Rawalpindi	485	546	8,669	95	66	4,861	255	210	...	2,252	...	2,747	565	...	3,402	...	...	4,538	13,146	21	Rs. 13,146
Murree Municipal Committee	167	307	101	...	137	712	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock	382	580	1,354	25	64	2,405	595	24	336	2,344	...	3,419	...	...	...	...	...	2,236	8,060	21	Rs. 8,060
Manawali	670	435	951	39	88	2,153	...	858	...	809	...	2,362	...	...	...	...	...	2,236	8,060	21	Rs. 8,060
Montgomery	416	1,032	2,269	248	75	4,030	1,600	336	...	685	...	2,866	311	...	...	376	892	1,768	8,863	21	Rs. 8,863
Lyallpur	...	480	1,147	1,695	4,429	...	...	7,271	3,533	864	3,650	5,669	...	13,016	195	...	...	760	...	5,970	27,437	21	Rs. 27,437
Jhang	407	593	2,725	112	45	3,882	280	28	...	2,245	...	2,620	330	...	1,210	...	...	1,540	8,042	21	Rs. 8,042
Multan	599	927	9,278	...	...	11,067	800	168	...	3,031	...	4,003	943	...	1,050	...	...	2,193	17,263	21	Rs. 17,263
Muzaffargarh	660	1,163	4,111	...	...	6,027	...	1,015	1,494	1,887	...	1,283	366	...	150	...	...	711	12,387	21	Rs. 12,387
Pera Ghazi Khan	384	769	89	200	183	1,675	...	...	...	...	...	...	370	...	423	...	...	793	2,368	21	Rs. 2,368
TOTAL	...	3,372	21,392	27,941	78,882	2,781	10,631	1,41,627	24,239	4,921	13,611	53,578	...	15,133	1,11,542	5,903	19,210	12,756	62,238	1,00,107	3,36,758	21	Rs. 3,36,758

* Includes Rs. 13,000 paid to Government as contribution.

† Surplus credited to Government.

‡ Includes Rs. 5,500 paid to Government as contribution.

§ Includes Rs. 7,871 paid for fair site at Gujranwala.

TABLE XVI.

RETURN OF ANIMALS ON THE HISSAR CATTLE FARM FOR THE YEAR 1912-13.

Detail.	Herd bulls.	Supernumerary bulls.	Cows.	Male produce.	Female produce.	Castrated produce.	Ordinance bullocks.	Cultivation bullocks.	Mules.	Pony mares for mble breeding.	Pony stallion.	Camels.	Donkey stallions.	Donkey colts.	Donkey mares.	Donkey fillies.	Rams.	Hives.	Male lambs.	Female lambs.	Female goats.	Female kids.	Male goats and kids.	Pony fillies.	Total.	REMARKS.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Balance on 1st April 1912	21	1	1,253	935	921	133	59	1	7	5	102	101	82	11	474	323	392	16	26	14	8	1	4,713			
Increase {	By birth	...	...	326	297	...	...	...	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	By purchase	...	...	12	8	...	...	...	90	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	By transfer	...	...	132	4	...	20	123	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	84	142	1,397	1,273	1,221	153	128	348	187	84	1	10	5	102	101	82	11	474	323	392	16	26	14	8	9,527	
Decrease {	Died	...	...	21	51	28	4	...	5	...	...	2	...	4	1	1	...	17	36	29	...	4	...	...	...	203
	Destroyed	...	...	3	1	...	1	1	1	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	10
	Sold	1	108	81	12	36	...	24	29	2	...	...	...	18	5	4	5	93	129	21	5	9	6	...	...	713
	Transferred	3	31	...	146	132	149	2	18	7	1	127
Total	4	189	105	212	196	153	128	48	90	3	...	2	...	22	6	12	5	112	106	177	5	15	6	...	...	1,546
Balance on 31st March 1913	30	3	1,292	1,061	1,025	...	...	500	157	81	1	8	5	80	95	70	6	362	157	215	11	11	8	3	4,981	
Value, Rs.	9,970	1,200	1,40,542	1,30,955	59,490	...	...	42,215	23,130	17,690	50	1,371	2,800	11,060	13,080	3,960	405	1,627	559	1,133	78	27	20	310	4,61,672	

TABLE XVI-A.

DETAILS OF SHEEP FOR THE YEAR 1912-13.

DETAILS	RAMS.				EWES.				MALE LAMBS.				FEMALE LAMBS.				REMARKS.	
	Country-bred.	Cross-bred.	Merino.	Total.	Country-bred.	Cross-bred.	Merino.	Total.	Country-bred.	Cross-bred.	Merino.	Total.	Country-bred.	Cross-bred.	Merino.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Balance on 1st April 1912	2	3	5	10	251	85	11	347	31	123	4	138	52	158	9	219	784	
By birth	...	...	...	...	...	...	...	...	...	164	1	165	1	168	4	173	938	
By purchase	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
By transfer	...	...	1	1	40	86	1	127	...	...	...	...	...	...	...	...	128	
Total	2	3	6	11	291	171	12	474	31	287	5	323	53	326	13	392	1,200	
Died	...	...	...	...	10	2	5	17	5	29	2	36	2	24	3	29	82	
Destroyed	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	2	
Sold	2	3	...	5	92	1	...	93	26	103	...	129	1	20	...	21	248	
Transferred	...	...	...	...	...	...	...	...	...	...	1	1	40	88	1	127	128	
Total	2	3	...	5	103	4	5	112	31	132	3	166	43	130	4	177	460	
Balance on 31st March 1913	...	...	6	6	198	167	7	352	...	155	2	157	10	196	9	215	740	
Value, Rs.	...	...	405	405	1,525	...	102	1,627	...	849	210	559	598	598	540	1,133	3,724	

TABLE XVII.

HISSAR FARM.

RESULTS OF DONKEY AND MULE BREEDING IN THE YEAR 1912-13.

	STALLIONS ACTUALLY EMPLOYED AT STUD.		NUMBER OF MARES COVERED.		AVERAGE OF MARES COVERED PER STALLION EMPLOYED AT STUD.		RESULTS OF PREVIOUS YEAR'S COVERINGS.		AVERAGE RESULT OF PREVIOUS YEAR'S COVERING PER STALLION EMPLOYED AT STUD.		REMARKS.
	Year under report.	Previous year.	Year under report.	Previous year.	Year under report.	Previous year.	Number of produce.	Number not held.	Average of produce.	Average of not held.	
1	3	4	5	6	7	8	9	10	11	12	13
Donkey-breeding ...	5	6	90	87	18	14.5	*67	20	11 16	3.33	*Includes 4 still born and slips.
Mule-breeding ...	5	5	68	52	13.6	10.4	+27	25	5.4	5	+Includes 3 still born and slips.

Stallions on register at close of year.

TABLE XVIII.

ABSTRACT SHOWING MAIN RESULTS OF THE WORKING OF THE
HISSAR FARM DURING THE OFFICIAL YEAR 1912-13.

				Rs.	A.	P.
<i>Receipts paid into Treasury.</i>						
Sale of animals (a)	...	...	...	72,344	8	0
Sale of produce	...	...	...	36	0	0
Other heads	...	...	...	13,985	13	8
Total				86,366	5	8
<i>Expenditure.</i>						
Salaries and travelling allowances of officers	...	...	...	13,018	12	10
" " " " of subordinate staff	...	...	...	33,947	15	9
Cultivation expenses	...	...	...	22,300	9	1
Feed and keep of animals, including reserve fodder	...	...	...	30,181	14	2
Purchase of animals	...	...	...	14,486	0	0
Other heads (b)	...	...	...	42,266	5	9
Total				1,56,201	9	7
<i>Valuation of animals issued on book credit.</i>						
Siege train bullocks	...	...	...	18,750	0	0
Army transport bullocks	...	...	...	...	...	...
Bulls	...	...	...	...	...	...
Mules and donkeys	...	...	...	9,775	0	0
Total				28,525	0	0
<i>Valuation of animals, grain and fodder, etc., on hand at end of year.</i>						
Valuation of animals as per table XVI attached	...	...	...	4,61,672	0	0
" of grain	...	...	...	5,950	6	8
" of fodder	...	...	...	32,482	10	0
" of machinery and dead stock articles...	...	...	...	47,698	11	9
Total				5,47,803	12	5

(a) includes valuation of animals issued on book credit.

(b) includes also the following items adjusted by book debit system :—

Rupees 30,277-0-0 for original works (grain godown, etc.) for 1911-12 and 1912-13.

Rupees 3,776-0-0 for repairs (annual).

Rupees 1,139-8-0 for foreign stores.

Rupees 36-1-4 for stationery received.

Rupees 35,228-9-4

NO DN. 28/12/13

